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Federal Communications Commission
Office of Secretary

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of)
)
Advanced Television Systems)
and their Impact Upon the) MM Docket No. 87-268
Existing Television Broadcast)
Service)

To: The Commission

PETITION FOR RECONSIDERATION

Cordillera Communications, Inc. ("Cordillera"), by its attorneys, and pursuant to 47 C.F.R. § 1.429(a) (1996), hereby petitions the FCC for reconsideration of its Fifth Report and Order and Sixth Report and Order in the above-captioned proceeding.¹

I. Introduction

Cordillera is the parent company of the licensees of nine VHF television stations (listed on Exhibit A hereto) licensed to communities in Arizona, Idaho, Colorado, Louisiana and Montana. Cordillera wholly supports the movement toward full implementation of digital television ("DTV") and applauds the Commission's efforts to bring this new television service to the American public. Nonetheless, there are several elements of the Commission's DTV rules, including the determination of core spectrum, relocation to NTSC channels at the end of the transition period, construction deadlines, and DTV's impact on low power

¹Fifth Report and Order, MM Docket No. 87-268, FCC 97-116 (released April 21, 1997); Sixth Report and Order, MM Docket No. 87-268, FCC 97-115 (released April 21, 1997) ("Sixth R&O") (collectively, the "R&Os").

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television operations, that must be reconsidered before final rules and a final DTV Table of Allotments are adopted.

II. The Commission Must Allow Broadcasters To Comment on OET Bulletin No. 69 Before It Finalizes the DTV Table of Allotments.

In order to evaluate whether the DTV Table implements the Commission's objectives in specific instances, interested parties must be able to calculate the interference that is likely to result and determine the service areas of new DTV stations in accordance with the Commission's methodology (Longley-Rice). But the critical piece of information necessary for stations to evaluate contours—*OET Bulletin No. 69*—has not been timely released though the Sixth R&O refers to it numerous times. Without *OET Bulletin No. 69*, it is impossible, for example, for stations to know precisely what operating parameters for the Longley-Rice methodology apply or what amount of interference is considered *de minimis*. In turn, it is impossible for stations to know how to assess the reasonableness of either their own DTV allotment or those of nearby licensees. Moreover, broadcasters are ill equipped to verify whether the DTV Table meets *any* standard of adequacy, much less whether it achieves the goals of service replication and minimal interference as the Commission contends.²

Therefore, before the rules and the DTV Table become final -- but *after* the Commission's methodology is made available -- the Commission should give interested parties a further opportunity to comment on the Table and the methodology. A brief additional comment period of 90 days will not significantly delay implementation of the

²As a matter of administrative law, the Commission must, of course, set forth the basis and underlying support for its rules in a manner that is sufficiently detailed to permit judicial review. See, e.g., National Nutritional Foods Association v. Weinberger, 512 F.2d 688, 701 (2d. Cir. 1975), cert. denied, 423 U.S. 827 (1975).

transition to DTV. Indeed, to the extent that there are problems with the DTV Table, the Commission can correct those problems more efficiently and expeditiously if they are identified in a further round of comments while this proceeding remains open rather than if such issues are raised in a plethora of separate petitions for rulemaking filed after the DTV Table becomes final.

III. Commission Rules Should Protect Existing NTSC Coverage From Interference Caused By DTV Operations.

In the Sixth R&O, the Commission declined to adopt any special provisions that would mitigate interference among television stations during the DTV transition period. See Sixth R&O ¶ 87. The Commission reached this conclusion based on its estimate that the DTV Table of Allotments would fully protect 98.8% of the geographic area and 98.6% of the population served by existing stations. Id. Until these figures can be confirmed and broadcasters can assess fully levels of interference, the Commission should not dismiss so quickly the need for interim measures to ensure against interference between NTSC and DTV operations during the DTV transition period.

Because of the unavailability of OET Bulletin No. 69, broadcasters have been unable to assess accurately the extent to which DTV operations will interfere with nearby NTSC stations. Upon further review, broadcasters may determine that DTV-to-NTSC interference will be significant in particular circumstances (e.g., adjacent-channel, co-channel operations) and that interim measures may be necessary to minimize interference and to ensure that viewers continue to receive NTSC signals during the transition period. Review and analysis of the OET technical standards should permit Cordillera to complete this determination. In situations where excessive interference is predicted or does in fact occur, licensees should be

able to rely on Commission rules to protect NTSC service areas. Accordingly, to the extent any specific rules could be adopted that would provide for NTSC coverage protection, Cordillera requests that the Commission use this reconsideration proceeding to take such action.

IV. The Commission Should Extend The DTV Construction Deadlines.

Extension of the DTV construction deadlines is essential to a smooth DTV transition. Although Cordillera is committed to implementing DTV, it will need more time to plan and construct its stations' DTV facilities. The planning stage alone will require substantial time and financial resources. For each of its stations, Cordillera must conduct a basic analysis of the station's DTV assignment and power and height limitations. This analysis cannot be completed yet because OET Bulletin No. 69 has not yet been released. Cordillera must then determine what sites, if any, are available for use as a DTV tower site. If necessary, Cordillera may have to acquire land and construct its own towers to accommodate DTV operations. As the Commission well knows, negotiation for a tower site involves a full array of contractual and local and federal regulatory issues that must be resolved before any ground is broken. Cordillera also will need to study what equipment it will need not only to provide the city grade coverage that will be initially required but also to provide its viewers with maximum service. Equipment must then be ordered, delivered, configured, installed and tested. All of this must be done for nine television stations. In addition, because of the location of the majority of its stations, Cordillera must evaluate the impact of DTV on its viewers who receive the stations' current NTSC signals via translator. Cordillera has no intention of abandoning these viewers and wishes to ensure that its DTV operations will

serve viewers in the same manner as existing NTSC operations. In short, the full implementation of DTV will take additional time beyond the 10-year period the Commission has established. Cordillera urges the Commission either to extend the construction deadlines or to relax the standards for granting construction extensions. Cordillera believes the former solution is a better one as it reflects the realities of DTV implementation and ensures that Commission resources are not needlessly expended processing extension applications.

V. The Core Spectrum Must Include Channels 2-6.

Cordillera encourages the Commission to include Channels 2-6 in the "core" DTV spectrum. This decision should be made now rather than in two years; postponing a decision on this issue will only add to the uncertain and complicated nature of the DTV transition process.

The benefits of operation on a low VHF channel are well-established. See Engineering Statement of Donald Everist of Cohen, Dippell and Everist (included in Exhibit B hereto) (the "Engineering Statement"). Stations currently operating on these channels are able to provide high-quality television service over wide areas. Id. at 2. For Cordillera's stations, the majority of which operate in the western and mountain states, operations on low channel VHF stations are essential to reaching viewers residing in sparsely populated areas. Despite these benefits, however, the Commission has been reluctant to include Channels 2-6 in the "core" spectrum. Although a number of broadcasters support this proposal,³ the

³See, e.g., Petition for Reconsideration of Decision Regarding Channels 2-6, filed May 29, 1997; Comments of duTreil, Lundin & Rackley, Inc. in Sixth Further Notice of Proposed Rule Making, filed Nov. 9, 1996 ("du Treil Comments").

Commission still seems to be under the impression that low VHF channels are technically unsuitable for DTV operations. Sixth R&O ¶ 83.

Cordillera understands that DTV operations on low VHF channels may pose a number of technical problems, including impulse noise caused by man-made sources (e.g., utility lines) and natural phenomena (e.g., lightning). Nonetheless, Cordillera believes that with further engineering study and analysis, these technical problems could be corrected to allow for high quality DTV service on these low VHF channels. It may also be necessary for DTV stations operating on low VHF channels to operate with higher power to overcome noise interference. In addition, stations who return to their low VHF channels at the end of the transition period will not incur nearly the same level of cost in converting to DTV than if these stations remained on UHF channels. In short, the Commission should not rule out channels 2-6 as viable channels for DTV operations.

It is important for the Commission to reach a decision now with respect to core spectrum. Cordillera understands that the DTV transition period will be a complicated and uncertain process. Where the Commission can eliminate that uncertainty, however, it should do so. A decision on the final core spectrum would provide far more certainty to the DTV transition process. Indeed, unless a determination is made about the core spectrum, broadcasters may not have as much of an incentive to implement DTV fully, knowing that any plans they make regarding alternative allotments, transmitter sites, and power levels could be disrupted by a change in the definition of "core spectrum."

VI. Broadcasters Should Return to Their NTSC Channels At the End of the DTV Transition Period.

In the Sixth R&O, the Commission declined to require stations to return to their NTSC channels following the end of the DTV transition period. Cordillera urges the Commission to reconsider this decision, particularly with respect to stations currently operating on low VHF channels (assuming such channels are included in the final "core" spectrum). Such a requirement would enable these broadcasters to achieve a greater degree of service replication and allow for more efficient spectrum allocation. See du Treil Comments at 2. It will also add an additional level of certainty to the DTV transition process enabling broadcasters to make the long-term transition to full DTV operations more efficiently and quickly.

VII. Low Power Television Operations Must Be Protected Throughout the DTV Conversion Process.

Cordillera supports the changes to the low power television ("LPTV") rules that the Commission adopted to minimize the impact DTV will have on LPTV and TV translator operations. Cordillera, however, encourages the Commission to adopt rules that would ensure the viability and survival of LPTV and TV translator stations in a digital world. Such alternatives could include (a) including LPTV stations and TV translators in the DTV Table of Allotments, (b) providing existing LPTV and TV translator stations a preference in applying for unused DTV spectrum, or (c) allocating Channels 60-69 specifically for the LPTV/TV translator service on a permanent basis to the exclusion of other non-broadcast services.

Although the LPTV service has traditionally been characterized as "secondary," for many television viewers, it is a primary service. This is particularly the case with viewers of Cordillera's stations in Idaho, Montana and Colorado. Cordillera, like other similarly-situated broadcasters, has constructed an extensive translator network to ensure that stations' NTSC signals can be transmitted to cable headends and over-the-air viewers located in the mountainous areas of these states. Currently, Cordillera's Montana, Idaho and Colorado stations are retransmitted on approximately 200 translators covering rural areas in Montana, Colorado, Nevada, and Idaho. For many viewers, such translators are the only source of television service.

The conversion to DTV will not replicate the coverage of the Cordillera stations' translator network. Moreover, Cordillera anticipates that many of these stations will be displaced by DTV allotments. Given that these translators provide primary over-the-air television service to viewers in these western and mountain states, it is essential that the Commission develop rules to ensure the continued viability of translators during and after the DTV transition period.

VIII. Coordination With Canada and Mexico Must Be Finalized.

Cordillera strongly urges the Commission to conclude its coordination with Canada and Mexico so that its stations' DTV channel assignments may be finalized.

IX. The Commission Should Reconsider or Clarify The Use of Coordination Committees.

Cordillera requests that the Commission reconsider or clarify the use of private committees to coordinate changes in DTV allotments. Given its expertise and long and successful history in coordinating NTSC allotments, the Commission is probably in the best

position to coordinate the same process for DTV. However, if the Commission determines that private coordination committees are necessary, the Commission must provide more extensive guidance on how these committees should be organized and governed. The Commission also must establish strict operating parameters for such committees to follow to ensure the coordination process remains unbiased and equitable.

X. Conclusion.

The Commission has clearly made great strides in the development of digital television service. Nonetheless, the rules for this new service should not be finalized until broadcasters have the opportunity to comment on the OET technical standards. Fundamental fairness requires that the Commission not finalize the DTV Table and rules until this comment process is complete.

Cordillera encourages the Commission to include Channels 2-6 in the "core" DTV spectrum given the proven technical quality of television service on these channels. A decision on core spectrum should be made now to provide more certainty for low VHF stations as they implement DTV operations. The Commission's DTV rules also should provide that broadcasters, particularly those operating on VHF channels, return to their NTSC channels at the end of the DTV transition period, and include criteria for protection of NTSC coverage areas from DTV operations during the transition period.

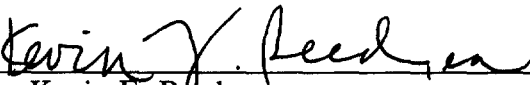
Cordillera also supports an extension of the DTV construction deadlines. It will be next to impossible for broadcasters to complete DTV implementation for all stations by 2006. Finally, Cordillera urges the Commission to adopt rules that will enable LPTV and TV translator facilities to continue operations on a permanent basis both during and after the

DTV transition period. Such rules are necessary to ensure that viewers who receive their primary television service from translators do not lose that service once the conversion to DTV begins.

Based upon the foregoing, Cordillera urges the Commission to reconsider its R&Os in this proceeding.

Respectfully submitted,

CORDILLERA COMMUNICATIONS, INC.

By: 
Kevin F. Reed
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Its Attorneys

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June 13, 1997

Exhibit A

Cordillera Stations

Cordillera is the parent company of the following television station licensees:

- (1) KVOA Communications, Inc., licensee of KVOA-TV, NTSC Channel 4, Tucson, Arizona
- (2) Sangre de Cristo Communications, Inc., licensee of KOAA-TV, NTSC Channel 5, Pueblo, Colorado
- (3) Sawtooth Communications, Inc., licensee of KIVI-TV, NTSC Channel 6, Nampa, Idaho
- (4) KATC Communications, Inc., licensee of KATC(TV), NTSC Channel 3, Lafayette, Louisiana
- (5) KRTV Communications, Inc., licensee of KRTV(TV), NTSC Channel 3, Great Falls, Montana
- (6) KXLF Communications, Inc., licensee of KXLF(TV), NTSC Channel 4, Butte, Montana
- (7) KCTZ Communications, Inc., licensee of KCTZ(TV), NTSC Channel 7, Bozeman, Montana
- (8) KTVQ Communications, Inc., licensee of KTVQ(TV), NTSC Channel 2, Billings, Montana
- (9) KPAX Communications, Inc., licensee of KPAX(TV), NTSC Channel 8, Missoula, Montana

Exhibit B

Engineering Statement of Cohen, Dippell & Everist

**ENGINEERING STATEMENT
IN SUPPORT OF
PETITION FOR RECONSIDERATION
MM DOCKET 87-268
ON BEHALF OF
CORDILLERA COMMUNICATIONS, INC.**

JUNE 1997

**COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.**

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

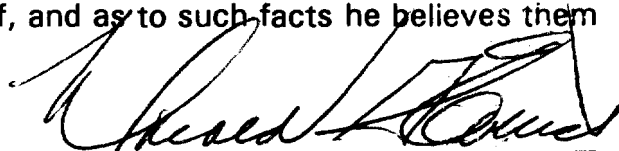
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

That his qualifications are a matter of record in the Federal Communications Commission;

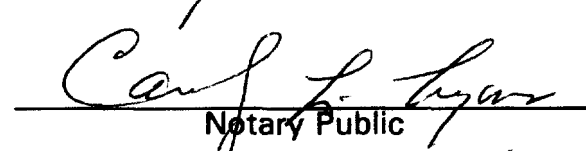
That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.



Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714

Subscribed and sworn to before me this 13th day of June, 1997.



Notary Public

My Commission Expires: 2/28/98

This engineering statement has been prepared on behalf of Cordillera Communications, Inc. ("Cordillera"), parent company of the licensees of Stations KVOA(TV), Tucson, Arizona [NTSC Ch. 4]; KOAA-TV, Pueblo, Colorado [NTSC Ch. 5]; KIVI(TV), Nampa, Idaho [NTSC Ch. 6]; KATC(TV), Lafayette, Louisiana [NTSC Ch. 3]; KTVQ(TV), Billings, Montana [NTSC Ch. 2]; KCTZ(TV), Bozeman, Montana [NTSC Ch. 7]; KXLF-TV, Butte, Montana [NTSC Ch. 4]; KRTV(TV), Great Falls, Montana [NTSC Ch. 3]; and KPAX-TV, Missoula, Montana [NTSC Ch. 8].

This statement is in support of a Petition for Reconsideration of the Sixth Report and Order, and Fifth Report and Order, MM Docket No. 87-268¹ ("collectively, the Report and Order") by the Federal Communications Commission ("Commission"). In addition to identifying concerns regarding the potential impact of the Commission's decisions in the Sixth Report and Order, the FCC is specifically requested to reconsider and amend its DTV allotment table contained in Appendix B of the Sixth Report and Order in regard to the DTV allotment for KOAA-TV, as discussed below.

Cordillera has authorized this firm to conduct studies and review the various aspects of the Report and Order as it applies to its stations. This study was conducted on the

¹MM Docket No. 87-268, "In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service," adopted April 3, 1997.

impact of the Report and Order on the Cordillera stations' current NTSC service areas and the interference which could result to existing service by new digital operations and the service replication by the assigned digital television ("DTV") operation for each station.

The Cordillera stations that will be negatively impacted by the new DTV rules have been selected for study and they are KVOA-TV, Tucson, Arizona and KOAA-TV, Pueblo, Colorado and Cordillera's Montana and Idaho stations which rely on an extensive translator network to provide television service. Accordingly, a study of KRTV, Great Falls, Montana reveals that approximately 53 % of the viewers are serviced by translators.

Cordillera stations serve markets ranging from small to medium-sized markets. These markets are very diverse. The service areas range from relatively flat to very rugged terrain. Seven of the nine stations operate in the low-band VHF band. Typically low-band VHF stations provide wide service depending upon the terrain area. In rugged mountainous terrain, its service is complemented by off-the-air translators and cable. It is this unique service combination that Cordillera needs to maintain through the DTV transition and DTV conversion period. Cordillera recognizes the Commission's difficult task of balancing the needs of all, however it urges the Commission to provide due consideration to stations who provide wide service over sparsely settled areas.

For example, Cordillera notes that the following stations are carried by translators.

<u>Station</u>	<u>No. of Translators</u>
1. KIVI(TV), Nampa, ID	19
2. KOAA(TV), Pueblo, CO	18
3. KXLF(TV), Butte, MT	21
4. KTVQ, Billings, MT	72
5. KRTV	42

Cordillera's other stations in these areas have similar service delivery systems.

Cordillera's technical concerns are that:

1. Existing off-the-air terrestrial full power, translator and cable NTSC services be maintained in the implementation phase of DTV
2. Existing off-the-air terrestrial full power, translator and cable, NTSC services be maintained in the transition phase of DTV
3. Existing off-the-air terrestrial full power, translator and cable services be maintained in the final phase of DTV

It is these goals that Cordillera believes must be achieved for its stations to provide a seamless terrestrial service transition to DTV. The technical context of those goals is to be able to:

1. maintain existing service areas,

2. deliver a quality signal often over long distances in rugged terrain to distant cable and translator facilities²
3. Offer that same service to the maximum extent possible with new DTV signals.

The technical concern is that DTV in its initial phase will be (1) on a frequency band which is not as robust as the low VHF band and (2) that the DTV signal will be more fragile than the current NTSC signal. For these reasons, it is imperative that the propagation model be subject to intense scrutiny so that the most accurate propagation model can result.

Recognizing these diverse, often conflicting technical issues, Cordillera believes that industry regional coordinating committees can only fill a very narrow and limited technical role.

For example, Cordillera submitted two (2) technical changes for its facilities to the appropriate regional committees. To this date, no response has been received. Therefore, Cordillera believes the overview of these changes which have been handled by the Commission in the past, is a function only the Commission can perform in the future.

²Cordillera applauds and supports the Commission's goals and efforts to maintain existing translator service.

COVERAGE ASSESSMENT

A study of KVOA-TV's and KOAA-TV's existing NTSC and proposed DTV service areas has been performed by using the National Telecommunications and Information Administration Institute for Telecommunication Sciences ("ITS") computer using the Communication System Performance Model--Point to Point Irregular Terrain HDTV Model ("HDTV model"). The HDTV model uses the Longley-Rice propagation methodology and evaluates in grid cell size 0.75-1.5 km with 3-second terrain data intervals between every 90 meters to 100 meters at one degree intervals. This HDTV model was selected since it is believed it generally replicates the Commission's DTV assignment model. An ITS representative indicates that it believes that the HDTV model follows the Commission's decisions in the Report and Order.

The Report and Order provides the decisions made by the Federal Communications Commission regarding DTV allotments, procedures for assigning DTV frequencies and plans for spectrum recovery; however, crucial information is not provided in which to make informed evaluations and therefore judgements cannot be made. Specifically, Commission indicates in Section 73.622(e) of the FCC Rules³ that OET Bulletin 69 furnishes detailed information on service computational methodology. Also, the

³See E-29, MM Docket No. 87-268, Sixth Report and Order, Adopted April 3, 1997; Released April 21, 1997.

Commission indicates in Section 73.623 that OET Bulletin 69 will provide guidance on interference computation.⁴ This report has not been made available to the industry and therefore an independent evaluation of each of the Cordillera stations cannot be performed for either service or interference considerations. Furthermore, such issues as whether interference protection to existing NTSC service by DTV operations, whether protection to existing translators or cable headends or whether NTSC service replication by the proposed DTV facility as rendered cannot be performed. Without this technical information, these very necessary evaluations cannot be made or estimated. This information has a direct impact on equipment selection decisions such as the transmitting antenna and DTV power to be used during the transition period.

There are a number of issues concerning the implementation of the Longley-Rice model and other related studies that are important considerations when assessing the results of the FCC's calculations for individual stations. Such issues include:

1. the confidence factor used in the studies,
2. the size of the individual cells studied and whether these sizes are appropriate for some terrain conditions,
3. the manner of selecting the centroids for population calculations, etc. and,

⁴For example, application of the dipole factor needs to be fully understood.

4. whether the values and methodology are appropriate for the range of propagation paths that are found throughout the areas where allotment calculations are required. This is critical for wide area service stations such as Cordillera.

It is recognized that the FCC had to assume implementation criteria for the country as a whole, even if individual situations may exist where other criteria might be more appropriate. For this reason, the Commission should review its model so that it more closely replicates existing service areas particularly in outlying areas.

The Report and Order indicates that considerable effort has been directed to coordination issues with the Canadian and Mexican administrations. However, it does not provide any insight when the Commission will conclude that effort with either or both administrations. Therefore, the Cordillera stations in Arizona and Montana face uncertainty until the international DTV television coordination is finalized.

Cordillera supports the concept of stations returning to their assigned NTSC channel for its DTV operation. Therefore, Cordillera also urges that the Commission only authorize new DTV facilities for other existing NTSC operations at distances equal to or greater than those specified in Section 73.623(d).

Cordillera operates all of its NTSC stations with non-directional antennas. All transmitting antennas are top-mounted. While Cordillera owns most of its tower facilities,

initially it may need to side-mount the DTV antennas. There is no assurance that a side-mounted DTV antenna will replicate the pattern that is envisioned for the DTV operation. Obviously, if pattern replication is placed in doubt, the replicated service area projected by the Commission cannot be achieved. Cordillera will, if necessary, file applications for higher DTV power.

**PETITION FOR RECONSIDERATION FOR
KOAA-TV, PUEBLO, COLORADO**

Cordillera has studied moving its planned DTV operations to Cheyenne Mountain near Colorado Springs. Based upon the studies conducted to date without the benefit of OET Bulletin 69, it is found that DTV Ch. 27 can be relocated to Cheyenne Mountain. To date, studies indicate that both service to the principal community of Pueblo, Colorado, and interference protection is rendered. The coordinates for Cheyenne Mountain are:

North Latitude: 38° 44' 43.3"

West Longitude: 104° 51' 41.3"

An antenna center of radiation at a height above ground of 98 meters and 2966 meters AMSL is proposed. The elevation above average terrain is 2251.2 meters and the antenna HAAT is 715 meters.

Implementation of DTV service for KOAA-TV on Cheyenne Mountain rather than at Pueblo, Colorado, will be more effective and will facilitate early implementation by KOAA-TV. For these reasons, it is requested that the Commission reconsider and amend

the DTV Table in Table 1 of Appendix B of the Report and Order to specify a DTV channel for KOAA-TV with the specifications listed in the preceding paragraph.

SUMMARY

Cordillera requests that the Commission give special attention to areas of the country whereby NTSC service is achieved by:

1. taking advantage of low-band frequencies
2. operating from sites that provide the ability to send TV signals throughout the year over long distances and very unfavorable terrain
3. permit relocation of Station KOAA-TV's DTV frequency to Cheyenne Mountain